## **Online Modeling Tools: Evaluating Postfire Erosion Risk**

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During Busy fire seasons, post-fire assessment teams need erosion modeling tools to quickly assess the risks of elevated runoff and sediment delivery to infrastructure and water resources. Major advancements in our knowledge of postfire assessments, risk analysis and erosion control treatment effectiveness have improved our ability to understand the consequences and outcomes that occur in the postfire environment. Disturbed areas often increase overland flow connectivity degrading water quality and water resource.

We have developed accessible and easy-to-use Water Erosion Prediction Project (WEPP) based online models to help land managers predict postfire runoff, soil erosion and sediment delivery from disturbed forests and rangelands. These models, Disturbed WEPP, the Erosion Risk Management Tool (ERMiT), and the Peak Flow Calculator allow users to vary climate, soil texture, local topography, vegetation, and surface cover. Disturbed WEPP predicts annual runoff and sediment yields from young and old forests, following wildfire, grazing, and timber harvest. ERMiT is more appropriately used by land managers to predict the probability of postfire sediment delivery for a given storm for hillslopes left untreated and hillslopes treated mulch, seeding, or erosion barriers. The latter model aids in decisions of where, when, and how to apply postfire mitigation treatments. These tools are also available as Disturbed WEPP Batch and ERMiT Batch allowing users to vary input parameters and efficiently compare results in simple spreadsheet output tables. The Peak Flow Calculator allows users to quickly determine peak discharge rates for small watersheds. WEPP Watershed Online GIS Interface is the most recent addition to our suite of user-friendly model platforms.

These easy to access and easy to use tools assist in making the best use of limited rehabilitation resources and assessing fire effects on soils in conjunction with local climate and watershed characteristics.